

ZOLOTYN, T.M.; KOBELNYA, V.A.

Means for increasing oil yield. Geol. nefti i gaza 4 no.11:54-59 N  
'60. (MIRA 13:11)

1. Neftopromyslovoye upravleniye Tuzmasaneft'.  
(Oil fields--Production methods)

ZOLOYEV, M.T.; USENKO, V.F.; KOBEL'VA, V.A.; KISLYAKOV, Yu.P.;  
ISANGULOV, K.I.; GAZIZOV, Z.S.

Study of producing wells having bottom pressure below saturation  
pressure. Trudy MINKHIGP no.33:213-225 '61. (MIRA 15:1)  
(Oil reservoir engineering)

ZOLOYEV, T.M.; IMANAYEV, N.G.; KOBELEVA, V.A.; YAKUPOV, P.M.

Development of the Apsalyanovo water cut petroleum area of  
the Tuymasy field. Neft. khos. 42 no. 3:21-26 Mr '64.  
(MIRA 17:7)

KOENLIK, Jan, prof. Dr., Velke Losiny 268

Biological therapy. Lek. listy, Brno 9 no.24:570-572 15 Dec 54.  
(HEMOPATHY)

KOBELKA, Ladislav

Speeding the industrialisation of building. Pos stavby 10  
no.12:621-623 D '62.

KOBELKA, Ladislav

Let us resolutely carry out concepts of the technical and economic development of the building industry. Poz stavby 12 no.11:453-456 '64.

1. Section of the Building Industry of the Central Committee of the Communist Party of Czechoslovakia, Prague.

KOBELKO, M.P.

4543

KOBEL'KO, M.P., MEKHAIZIROVAYA ZAGRUZKA I SHURCVKA GAZOGENERATOROV  
(m.v. poduysotskiy. fil'tr dlya och stki vody pri polirovke stekla.  
m.), 1954. 2s. s chert. 26sm. (glaustroysteklo mpm SSSR. obmen  
opytem v stekol'noy prom-sti. inform. listok otd. tekhn. informatsii  
tresta "ORGSTEKL" l.o. 18). E50 eks. bespl. scst. ukazany v kontse  
teksta.-(54-15655sh)

666.1.035/662.72032

SO: Knizhnaya Letcpis', Vol. 1, 1956

KOBEL'KOV, A.I.

On the Donets Basin-Karpatian Mountains main line. Avtom., telem.  
i svias' 7 no.12:19-21 D '63. (MIRA 17:4)

1. Nachal'nik otdela signalizatsii, tsentralizatsii, blokirovki i  
svyazi Kasatinskogo otdeleniya Yugo-Zapadnoy dorogi.



ACC NR: AP6033468

SOURCE CODE: UR/0413/66/000/018/0054/0054

INVENTOR: Tager, A. S.; Mel'nikov, A. I.; Kobel'kov, G. P.; Tsebiyev, A. M.

ORG: None

TITLE: A method for generating and amplifying SHF oscillations using semiconductor diodes. Class 21, No. 185965

SOURCE: Izobret prom obraz tov zn, no. 18, 1966, 54

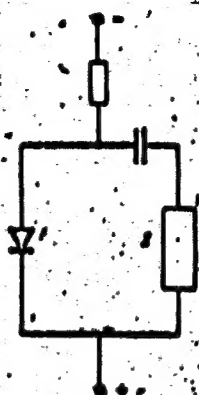
TOPIC TAGS: SHF oscillator, SHF amplifier, semiconductor diode, waveguide, resonator

ABSTRACT: This Author's Certificate introduces a method for generating and amplifying SHF oscillations using semiconductor diodes. Stable generation or amplification of oscillations in the centimeter and millimeter wavelength ranges is produced by placing the semiconductor diodes in a resonance or waveguide system, connecting them in a DC circuit and selecting their parameters and working points on the voltage-current curve in such a way that the resistance of the diodes on direct current and on frequencies below the working frequencies is positive while the resistance in the working frequency range is negative and greater than the resistance of losses in the diodes and in the high-frequency circuit.

Card 1/2

UDC: 621.373.422

ACC NR: AP6033468



1--diodes; 2--high-frequency circuit

SUB CODE: 09/ SUBM DATE: 27Oct59

Card 2/2

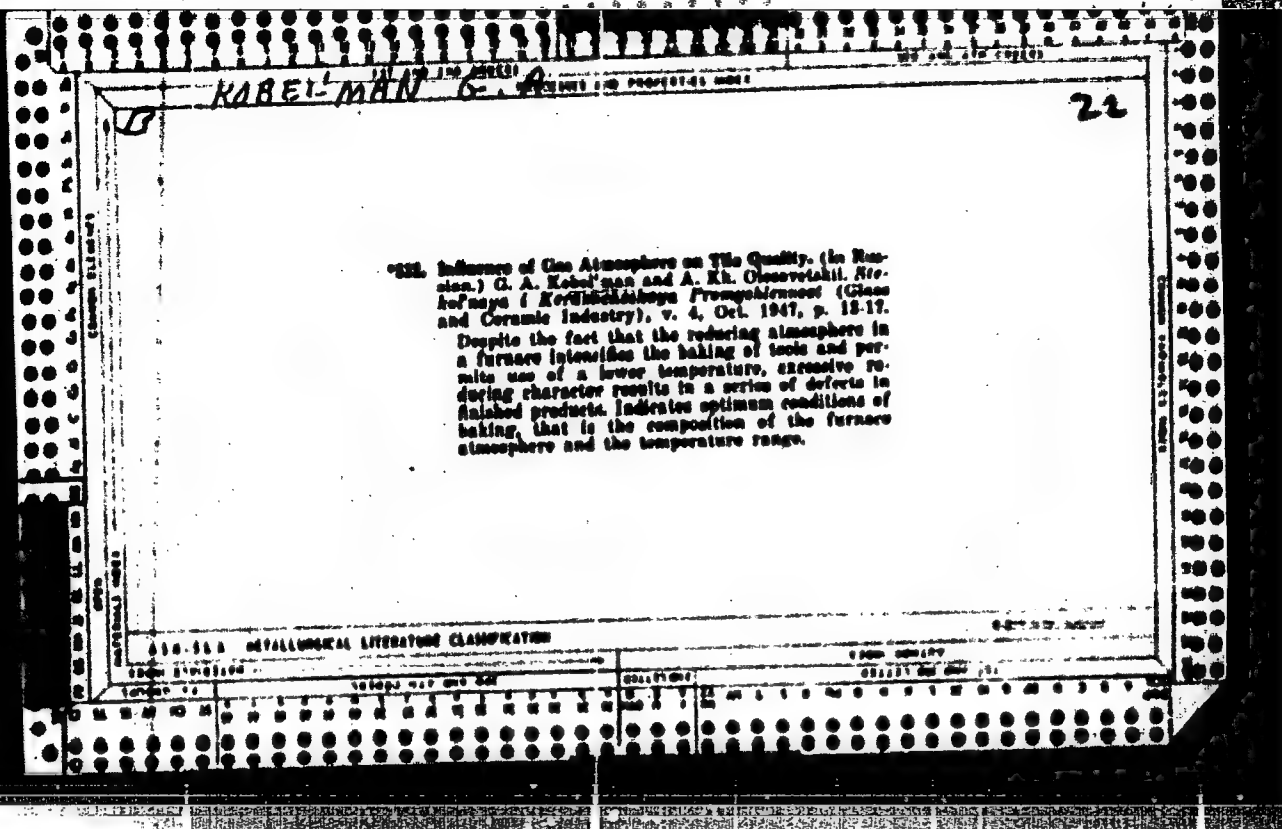
SHUGAL, Ya.G.; RYABOV, O.M.; BOCHAROVA, T.V.; KISLYAK, L.N.; KOBEL'TKOVA,  
A.M.; LYKOV, A.D.; MANYAKHINA, O.V.; SHLENKOVA, T.G.; YACUPOVA,  
Ye.I.; IVANOV, M.A.; RYBKI, I.P.; KHOKHLOVA, P.Ye.; KHRUMFYATINA,  
A.S.; FMOLOVA, M.I.; RAKOV, F.M., red.; MARCHENKO, V.A., red.;  
KOLPAKOV, B.T., red.; DUMINA, V.N., red.; MELENT'YEV, A.M., tekhn.  
red.

[Soviet commerce of the R.S.F.S.R.: a statistical manual] Sovet-  
skaya torgovlia v RSFSR; statisticheskii sbornik. Moskva, Gos.  
stat. izd-vo, 1956. 342 p. (MIRA 11:10)

1. Russia (1917- R.S.F.S.R.) Tsentral'noye statisticheskoye  
upravleniye.

(Commercial statistics)

KOBELMAN, G. A.		22
<p>Expansion of Ceramic Materials Upon Cooling. (in Russian.) G. A. Kobelman. <i>Glass and Ceramic Industry (U.S.S.R.)</i>, no. 1, 1947, p. 10-11.</p> <p>During dilatometric investigation, expansion of certain specimens was observed during the initial phases of cooling. A series of experiments run devised to clarify this phenomenon revealed that the presence of oxidized sulfur compounds promoted it. Use of a reducing atmosphere during baking, and cooling at the highest rate compatible with proper annealing, are recommended.</p>		
A 6.5.6 METALLURGICAL LITERATURE CLASSIFICATION		6-477 2nd 12/50
15708194	15708194	15708194



Br. Alu. KOBELMAN G.A.

B1-1, Glass, Ceramics

Method of simultaneous drying and pressing of materials. G. A. Kobelman, U.S. Pat. 3,111,111; Brit. Pat. 1,311,111; Fr. Pat. 1,311,111. The method separates moisture in pressing material between the two faces of an electrical conductor which

simultaneously heats it by high-frequency current. To prevent short-circuiting of the conductor when the material has a high electrical conductivity, a dielectric layer can be used to separate the conductor faces from the material. No experimental data are presented. H. B. CHASE.

КОВЕЛ'НИКОВА А. Я.

2

Preparation of paraffin was from Ichabawak grade oil. A. Ya. Kotschikova. *Gosneftkhim* No. 7, No. 4, 90 (1957). - Ichabawak grade oil contains 22.0% paraffin of d. 0.870,  $n_D^{20}$  viscosity 2.0 and pour point 30°. The distillate contains 14.7% paraffin w. m. 48.3°. The second distillate contains lubricating oils of viscosity  $n_D^{20}$  2.0, 11.20 and pour point -17° (23.5%); and a reduced oil with a viscosity  $n_D^{20}$  2.35,  $n_D^{17.5}$  17.5 and pour point -17° (15%).

A. A. Narkhanchik

22

ADDITIONAL BIBLIOGRAPHICAL LITERATURE CLASSIFICATION

FUZYREV, A.V.; ODINOKOV, I.V.; OSMOLOVSKAYA, T.; KOBELIAKOV, L.M.,  
red.

[Air conditioning in textile factories] Konditsirovanie  
vozdukh na tekstil'nykh predpriatiakh. Ivanovo, 1961.  
22 p. (MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut okhrany  
truda.



KOBELYAKOV, L.M., red.

[Materials of the All-Union Conference-Seminar on the Maintenance of Machines and Tractors of Collective and State Farms] Materialy Vsesoiuznogo soveshchaniia-seminara po tekhnicheskomu obelushivaniu mashinno-traktornogo parka kolxozov i sovkhozov. Moscow, 1963. Moskva, Biuro tekhn. informatsii i reklamy, 1963. 147 p.  
(MIRA 17:9)

1. Vsesoiuznoye soveshchaniye-seminar po tekhnicheskomu obelushivaniyu mashinno-traktornogo parka kolxozov i sovkhozov. Moscow, 1963.

KOBELYANSKIY, V.I., inzh.; CHERNOIVANENKO, V.A., inzh.

New coal preparation plants for hydraulically worked mines.  
Prom.stroi. 42 no.2:16-18 '65. (MIRA 18:4)

1. Sibirskiy gosudarstvennyy proyektnyy institut po obshchestvoit'-  
nomu i sanitarno-tekhnicheskomu proyektirovaniyu promyshlennykh  
predpriyatiy Gosstroya SSSR.

VASIL'YEV, V.G.; KOBELYATSKIY, I.A.; TIKHOMIROV, Yu.P.; CHERSKIY, N.V.

Current problems relative to gas prospecting in the Yakut  
A.S.S.R. Gas.prom. 5 no.1:13-17 Ja '60.

(MIRA 13:4)

(Yakutia--Gas, Natural--Geology) (Prospecting)

BARAYAN, G.D.; BARKHATOV, G.V.; BOBROV, A.K.; BONDARENKO, V.I.; VASIL'YEV, V.G.; KOBNLYATSKIY, I.A.; NIKOLAYEVSKIY, A.A.; TIKHOMIROV, Yu.P.; CHIRPIKOV, K.R.; CHERSKIY, N.V.; CHICHEMAROV, V.G.; REKMAN, Yu.K.; vedushchiy red.; MUKHINA, N.A., tekhn.red.

[Geology, and oil and gas potentials of the Yakut A.S.S.R.] Geologicheskoe stroenie i neftegazonosnost' Iakutskoi ASSR. Pod red. V.G.Vasil'eva. Moskva, Gos.nauchno-tekhn.isd-vo nef. i gornotoplivnoi lit-ry, 1960. 478 p. (MIRA 13:11)

(Yakutia--Petroleum geology)

(Yakutia--Gas, Natural--Geology)

~~REDACTED~~ (Shar'kov)

Operation of lime-soda water softening installations. Vol. 1 san.  
tekh. no. 11:34-38 N '58. (MIRA 11:12)  
(Feed-water purification)

GORNSHTEYN, D.K.; GUDKOV, A.A.; KOSOLAPOV, A.I.; LEYPTSIG, A.V.;  
 MEL'NIKOV, V.M.; MOKSHANTSEV, K.B.; FRADKIN, G.S.; CHERSKIY,  
 N.V.; TROFIMUK, A.A., akademik, nauchn. red. vyp.; ROZHKOV,  
 I.S., glav. red.; KOBEIYATSIY, I.A., sam. glav. red.;  
 SHATALOV, Ye.O., zam. glavn. red.; BONDARENKO, V.I., red.;  
 GRINBERG, G.A., red.; YELOVSKIY, V.V., red.; RUSANOV, B.S.,  
 red.; SEMENOV, O.T., red.; TKACHENKO, B.V., red.; KALANTAROV,  
 A.P., red. iad.-va; GUSEVA, A.P., tekhn. red.

[Basic stages of the geological development and prospects for  
 finding oil and gas in the Yakut A.S.S.R.] Osnovnye etapy geo-  
 logicheskogo razvitiya i perspektivy neftegazonosnosti Iakut-  
 skoi ASSR. [By] D.K.Gornshteyn i dr. Moskva, Izd-vo AN SSSR  
 1963. 238 p. (MIRA 16:12)

(Yakutia--Petroleum geology)  
 (Yakutia--Gas, Natural--Geology)

from May 24, 1961. [Abstractor's note: Complete translation.]

Card 1/1

ACC NR: AP7000678

SOURCE CODE: PO/0053/66/000/011/0529/0534

AUTHOR: Kobendza, Andrzej; Chorazy, Maria

ORG: Department of Electronics, Institute of Basic Problems of Engineering, Polish Academy of Sciences (Zaklad Elektroniki IPPT PAN)

TITLE: Certain properties of CdSe thin films and their use in active electronic devices

SOURCE: Przegląd elektroniki, no. 11, 1966, 529-534

TOPIC TAGS: microelectronic thin film, semiconducting film, semiconductor diode, CADMIUM SELENIDE, METAL DEPOSITION

ABSTRACT: The technology of obtaining CdSe thin films by vacuum deposition is described. Pure CdSe layers were deposited on freshly rifted mica or thoroughly degreased glass microscope slides. The base was preheated in a temperature range from 20 to 500°C; the evaporation was made at a pressure of  $4 \times 10^{-5}$  mm Hg; the deposition rate was 7 to 100 Å per sec (average 20 Å/sec). Metallic contacts from Al, In, Ag, and Au were evaporated on top of the CdSe. Specific resistivity  $\rho$  and carrier Hall mobility  $\mu$  were measured using the van der Pauw method. It was found that preheating the deposition material significantly affects  $\rho$ , which declines as temperature increases, and the time during which the CdSe must be baked in a vacuum. The temperature of the base during evaporation also has a basic effect on  $\rho$  and  $\mu$ . Neither parameter is affected by a layer thickness of over 0.4  $\mu$ , pressure below  $5 \times 10^{-5}$  mm Hg, the deposition rate, or the nature of the evaporation source.

Cerd 1/2

IMC: 546.68.621.389

P/053/62/000/012/006/011  
E192/E382

**AUTHORS:** Czychon, Herbert and Kobandza, Andrzej

**TITLE:** Use of photo-sensitive layers with vinyl polyalcohol  
in the manufacture of semiconductor devices

**PERIODICAL:** Przegląd elektroniki, no. 12, 1962, 701 - 703

**TEXT:** The shape of various active surfaces (e.g. emitter, base or diode junctions) can be controlled by using photo-sensitive layers made with vinyl polyalcohol, which is sensitized with the compounds of heptivalent chromium. These layers are useful for etching patterns on germanium and silicon surfaces, etching pre-determined spots on silicon oxides and deposition of electrodes. Apart from that, the layers can be used in deep etching of silicon and germanium necessary in the manufacture of mesa transistors and for providing masks during the deposition of metal layers. There are 3 figures.

**ASSOCIATION:** Zakład Elektroniki IPPT (IPPT Electronics Laboratory)

Card 1/1



**KOBENDZA, Andrzej**

Comparison of the properties of photosensitive layers with polyvinyl alcohol with the photosensitive properties of layers of emulsion produced by Kodaks KPR, PG, Resifax. Przegł elektroniki 5 no.3:114-122 Wr'64

1. Zakład Elektroniki, Instytut Podstawowych Problemów Techniki, Polska Akademia Nauk, Warszawa.

KOBENDZA, Andrzej

Comparison of the properties of photosensitive layers with polyvinyl alcohol with the photosensitive properties of layers of emulsion produced by Kodak: KPR, PC, Resifax. Pracei elektroniki 5 no.3:114-122 Wr'64

1. Zaklad Elektroniki, Instytut Podstawowych Problemow Techniki, Polska Akademia Nauk, Warszawa.

KOBENDZA, J.: KOBENDZA, R.

The Kampnoska Forest as an area for a metropolitan national park.

P. 1 (OCHRONA PRZYRODY) Poland, No. 24, 1957.

SO: Monthly Index of East European Acquisitions (AEEI) Vol. 6, No.11, November 1957.

ICHNEUMENA, Jadwiga

Attempt to date dunes in the Kampinos Primeval Forest, Prsegl geogr 33  
no.31383-399 '61.

KOBENDZINA, Jadwiga

Some phenomena accompanying eolian processes on dunes of the Kampinos  
Forest. Pracegl geogr 33 no.3:539-542 '61.

**BOROWKO-DLUZAKOWA, Zofia; KOBENDZINA, Jadwiga**

In connection with K. Wasylikowa's article. Przegl geogr 34 no.3:601-603 '62.

1. Instytut Geografii, Polska Akademia Nauk, Warszawa.

<p>11. ANAL. DATA</p> <p>ANAL. DATA</p>		<p>12. REFERENCES</p> <p>REFERENCES</p>	
<p>13. SUMMARY</p> <p>SUMMARY</p>		<p>14. COMMENTS</p> <p>COMMENTS</p>	
<p>15. CHEMICAL STRUCTURE</p> <p>CHEMICAL STRUCTURE</p>		<p>16. PHYSICAL PROPERTIES</p> <p>PHYSICAL PROPERTIES</p>	
<p>17. TOXICOLOGICAL DATA</p> <p>TOXICOLOGICAL DATA</p>		<p>18. BIOLOGICAL DATA</p> <p>BIOLOGICAL DATA</p>	
<p>19. ENVIRONMENTAL DATA</p> <p>ENVIRONMENTAL DATA</p>		<p>20. OTHER DATA</p> <p>OTHER DATA</p>	

ca 10

Some data on the preparation of acetylcholine chloride  
 H. A. Fisher and A. J. Kober. *J. Appl. Chem.*  
 (U.S.A.R.) 12, 113-30 (1942). It was shown that during  
 the hydrolysis of acetylcholine chloride (1) there are  
 formed at first acetylacetic acid and HCl, followed in  
 turn by AcOH and acetic acid; as a by-product there  
 is formed about 2% (acetylacetyl)acetic acid.  
 Hydrolysis of Ac group is hastened by increase of H ion  
 concentration. Hence by reducing of the vol. of water used  
 in a homogeneous water- $\text{Na}_2\text{CO}_3$  soln. the hydrolysis of  
 the  $\text{SO}_2\text{Cl}$  group occurs according to a first-order reaction,  
 with the time of "half-hydrolysis" being 37 min. at 37°.  
 40 min. at 30° and 18 min. at 45°. H ion does not affect  
 the rate, but OH ion greatly accelerates it. The soly. of  
 1 in  $(\text{CH}_3\text{Cl})_2$  however, and their 1:1 soln. was dried at  
 temp. between 0° and the b.p. The product may be  
 recrystd. equally well from either dry state or from a moist  
 state when  $(\text{CH}_3\text{Cl})_2$  is used for solvent at 20-70° with  
 10-20% retention in the mother liquor, which may be re-  
 used 2-3 times.  
 G. M. Kammerdell

*Organic Chemistry-1*

CP

Sulfonation reaction. XX. Sulfonation of sulfonic acids, their sodium salts, and sulfonyl chlorides. A. A. Spryukov and A. I. Kabanov (Invent. Chem. Tech. Inst.). *Zh. Obshch. Khim.* (1968), 32, 201-3 (1968); cf. *C.A.* 40, 8204, 8205, 10026; 1972B; preceding abstr. —Sulfonation of  $\beta$ -C<sub>10</sub>H<sub>7</sub>Cl is much more rapid than that of the free acid, which, in turn, is more rapid than that of the Na salt.  $p$ -MeC<sub>6</sub>H<sub>4</sub>SO<sub>2</sub>Cl derivatives display the same order of reactivity. The sulfonyl chloride sulfonates more rapidly because of the consumption of 1 mole H<sub>2</sub>O in its hydrolysis. Sulfonation with ClSO<sub>3</sub>H is also retarded by the presence of Na sulfonates. G. M. Kozlovskii



SPRYSKOV, A. A., KORENIN, A. I.

**Sulfonation**

Reaction of sulfonation. 20. Sulfonation of sulfonic acids, their sodium salts, and acid chlorides. Zhur. ob. khim. 22(84) No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.

KOBENIN, A. I.

Kobenin A. I.

"Investigation of the Triaryl-Ethane Series." Min Higher Education USSR.  
Ivanovo Chemicotechnological Inst. Ivanovo, 1954. (Dissertation for the  
Degree of Candidate in Chemical Sciences)

So: Knishnaya letopis', No 27, 2 July 1955

KOBENIN, A. I.

"Investigating the Triarylethane Series." Cand Chem Sci, Ivanovo Chemico-technological Inst, Ivanovo, 1954. (RZhKhim, No 7, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

**KOBENKO S. P.**

USSR/Diseases of Farm Animals. Diseases Caused by Protozoa.

Abs Jour: Ref Zhur-Biol., No 3, 1958, 12283.

Author : Goncharov, I. Ye., Kleymentov, K. G., Fedorchenko, V. V.,  
Kobenko, S. P.

Inst : Dagestan Institute of Agriculture

Title : Experimental Uses of ASD FR-2 in Theileriosis of  
Large Horned Cattle. (Preliminary Report).

Orig Pub: Tr. Dagest. s.-kh. in-ta, 1955, 6, 25-26.

Abstract: In cases of theileriosis and in cases of a mixed  
invasion of theileriosis and piroplasmosis, ASD  
FR-2 was intravenously administered in a 25 percent  
solution of a 0.7-1.0 ml/kg dose with a simultaneous  
hypodermic injection of a 10 percent caffeine solution  
in the usual dose. The preparation was administered  
during the clinical stage of the disease. Of the

Card : 1/2

S/275/63/000/003/013/021  
1052/1126

**AUTHORS:** Caichen Herbert, Kobendza Andrzej

**TITLE:** A method of removing oxide films from certain parts of semiconductor surfaces

**PERIODICAL:** Referativnyy zhurnal, Elektronika i yeye primeneniye, no. 3, 1963, 40, abstract 3B258P. (Pol. pat., cl.21g, 11/02, no. 45432, December 27, 1961)

**TEXT:** It is proposed to use as a photoresistor for silicon-base oxide films aqueous solution of poly vinyl alcohol sensitized by ammonium bichromate with an addition of a surface-active substance. After exposing the applied layer through the negative the unexposed parts of the emulsion are removed by washing in water. The tanned parts are treated in a chromic acid-solution of 50g/l concentration, or in a sulfurous phenolformaldehyde resin solution. To increase the acid-resistance after treatment in chromic acid, it is heated at 150 - 200°C during ~15 min; in the case of resin-solution treatment it is done at 220 - 330°C. After that the silicon oxide is etched off with hydrofluoric-acid solution to which ammonium fluoride is

Card 1/2

A method of removing oxide films from...

S/275/63/000/003/015/021  
A052/A126

added to reduce the water diffusion into the emulsion layer. When etching is finished the photoresistor is removed by heating the plates in saccharic, acetic or tartaric acid solution of 30 - 100g/l concentration.

M.S.

[Abstracter's note: Complete translation.]

Card 2/2

BRATKOWSKA-SENIOW, Barbara; DEKORZKOWA, Wanda; GRUSZKA, Stanislaw;  
KNAPIKOWA, Danuta; KURER, Alicja

Influence of treatment with adrenal cortex hormones on immuno-hematological lesions in hemopoietic system diseases and in visceral lupus erythematosus. Polskie arch.med.wewn. 30 no.3: 337-343 '60.

1. Z II Kliniki Choroż Wewnietrznych A.M. we Wrocławiu. Kierownik: prof.dr med. A. Falkiewicz i z Wojewódzkiej Stacji Krwiodawstwa we Wrocławiu. Dyrektor: doc.dr med. T. Dorobisz.

(ADRENAL CORTIX HORMONES ther.)

(HEMATOPOIETIC SYSTEM dis.)

(LUPUS ERYTHEMATOSUS ther.)

BRATKOWSKA-SZCINOW, Barbara; DEINERKOWA, Wanda; GRUSKA, Stanislaw; KOBIE, Alicja

Immuno-hematological changes in visceral lupus erythematosus. Polskie arch.  
med.wewn. 29 no.12: 1593-1600 '59.

1. z II Kliniki Chorob Wewnętrznych A.M. we Wrocławiu. Kierownik: prof.  
dr. med. A. Falkiewicz i z Wojewódzkiej Stacji Krwiodawstwa we Wrocławiu  
Kierownik: doc.dr.med. T.Dorobias.  
(LUPUS ERYTHEMATOSUS imm. int.)



WŁODARSKA, Krystyna; KOBER, Jerzy

Cystomas of the liver. Polski tygod. lek. 14 no.34:1581-1583 24 Aug 59.

1. (Z Zakładu Chirurgii Ogólnej Instytutu Doskonalenia i Specjalizacji Kadr Lekarskich w Warszawie; kierownik: doc. dr Josef-Kubiak i Szpitala Powiatowego w Radyminie, dyrektor: lek med. Jerzy Kober.  
(LIVER, neoplasma) (CYSTS)

KOBER, Jerzy

Dramatic course in a case of thrombosis of the upper mesenteric artery in a patient with simultaneous thrombosis of the abdominal aorta. Polski tygod. lek. 14 no.48:2115-2116 30 Nov 59.

1. (Ze Szpitala powiatowego w Radyminie; dyrektor: lek. med. Jerzy Kober)

(AORTA, dis.) (MESENTERIC VESSELS, dis.)  
(THROMBOSIS, compl.)

KOBER, J.

A device for measuring the electron tube base. Sdel tech 10  
no.9:355 8 '62.

KOBER, Leopold

Yugoslavia (430)

Science

Leitlinien der Tektonik Jugoslawiens. Beograd, naučna knjiga, 1952. 81 p. (Srpska akademija nauka. Geoloski institut, knj. 3) (Main tectonic lines of Yugoslavia. In German. Summary in Serbo-Croatian. Bibl., Fold. Maps.)

East European Accessions List Library of Congress Vol. 2, no. 3, March 1953.

UNCLASSIFIED

KOBERA, J., ins.

On the operation of the MAGVO 62 apparatus. Zel dop tech 12 no.6:  
161-163 '64.

KOBERA, Miroslav

Some problems of parcel transloading. Ca spoje 9 no.6:27 D '64.

1. Severoceska krajaka sorava spoju.

KCEE'ECKI, YICTR

Produkcja tlenu i obsluga aparatury. (Wyd. 1.) Warszawa, Panst-  
wowe Wydawn. Techniczne, 1954. 176 p. (Producing oxygen and  
attending the apparatus. 1st ed. illus. , bibl. , diagrs. , index,  
tables)

SOURCE: East European Accessions List, (EEAL), Library of Congress,  
Vol. 4, no. 12, December 1955





KONERIDZE, A.Y.

Effect of heteroauxin on the change of soluble carbohydrates and other stored matter in mulberry cuttings. Seob. AN Grus. SSR 8 no. 8: 547-554 '47. (MIRA 9:7)

1. Akademiya nauk Gruzinskey SSR, Botanicheskiy institut, Tbilisi.  
Predstavlena deystvitel'nyy otklenom Akademii N.N. Ketskheveli.  
(Hormones (Plants)) (Mulberry)

**KOENRIDGE, A.V.**

Rooting of cuttings, used as grape root stock, under the influence  
of growth promoting substances. *Sov. AN Oros. SSR* 9 no.2:121-126 '48.  
(MLA 9:7)

1.Akademiya nauk Gruzinskoy SSR, Botanicheskii institut, Tbilisi.  
Predstavleno deystvitel'nym chlenom Akademii N.N.Kotskheveli.  
(Roots (Betany)) (Grapes)

KOBERIDZE, A.V.

Rooting of mulberry cutting under the influence of heteroauxin.  
Sob. AN Gruz. SSR 9 no.5:307-311 '48. (MIRA 9:7)

1. Akademiya nauk Gruziaskoy SSR, Institut botaniki, Tbilisi.  
Predstavlena deystvitel'nyy chlenom Akademii N.N. Ketskhveli.  
(Growth promoting substances) (Mulberry)

KOBERIDZE

USSR, Plant Physiology - Growth and Development

H-4

Abs Jour : Referat Zhur - Biol, No 16, 25 Aug 1957, 68980

Author : Koberidze

Title : The Study of Anatomical-Physiological Changes in Grafting of Different Species of Plants, Treated with Growth Stimulants During their Rooting.

Orig Pub : Tr. Grus. s.-kh. in-ta, 1955, 42-43, 255-280

Abstract : The treatment by stimulates approximately doubles the percentage of rooting of graftings of grape, mulberry and other subtropical plants. The best rooting was manifested by cuttings taken in the spring from young plants. In treating cuttings an intensive division of cells of the cambium, bast, bark and heartwood with rays was observed; also a diminishing starch content and increase in sugar content. In cuttings of grape vines under cultivation the content of essential oils was increased.  
Bibl. 15 references.

Card 1/1

KOBERIDZE, A.V.

APPROVED FOR RELEASE: 09/18/2001  
Fisiol.rast. 5 no.5:450-453 5-0 '58. (NMA 11:11)

1. Kadebra fiziologii rasteniy Grusinskogo sel'skokhozyaystvennogo instituta, Tbilisi.  
(Viticulture) (Indoleacetic acid) (Grafting)

KOBERIDZE, Al. V.

Doc Biol Sci - (diss) "Theoretical and practical foundations for the application of hormones and growth stimulators." Tbilisi, Pub. Georgian Agricultural Inst, 1961. 94 pp; (Tbilisi State Univ imeni Stalin); 200 copies; free; list of author's works on pp 93-94 (28 entries); (KL, 6-61 sup, 205)

KOBERIDZE, L.Ya. (Makhachkala)

Glycogen content in the myocardium in experimental myocarditis.  
Arkhp.at. 24 no.5:52-56 '62. (MIRA 15:5)

1. Is kafedry patologicheskoy anatomii (sav. - prof. S.S. Kasab'-  
yan) Dagestanskogo meditsinskogo instituta (dir. - dotsent M.M.  
Maksudov).

(HEART--MUSCLE) (GLYCOGEN)

KASHAKASHVILI, N.V.; GLADKOSKOK, P.P.; KHOSHTARIYA, Sh.F.; MINDELI, M.Sh.  
Prinimali uchastiye: PARASTASHVILI, V.V.; KOBERIDZE, V.G.;  
CHKHEIDZE, Z.A.; RUKHADZE, E.A.; KENKELASHVILI, O.A.; SHAKASHIDZE,  
S. Sh.; GOGISHVILI, A.G.; MELKADZE, N.V.; ORAMASHVILI, A.V.;  
GORDEZIANI, N.N.; ABRAMISHVILI, R.N.

Performance of Transcaucasia Metallurgical Plant blast fur-  
naces operating on natural gas. Trudy GPI [Gruz.] no.4:11-23  
1962 (MIRA 17:8)

DZIERZKOWA-BORODEJ, Wanda; KOBER-KULESZA, Alicja; SUJAKOWA, Alina

Studies on immune iso-antibodies in human milk. I. Etiology of prolonged jaundice of newborn infants with the serological conflict of main groups. Pol. tyg. lek. 17 no.12:421-424 19 Mr '62.

1. Ze Stacji Krwiodawstwa we Wrocławiu; dyrektor: doc. dr Tadeusz Dorobias i ze Szpitala Miejskiego im. Madurowicza we Wrocławiu; dyrektor: dr. med. Sergiusz Doganowski.

(MILK HUMAN) (ANTIBODIES) (ERYTHROBLASTOSIS FETAL)  
(BLOOD GROUPS)



ANDREASIK, Zbigniew; KOBER-KULESZA, Alicja

Excretion of estrogens in males and in non-menstruating young girls and women. Ginek. Pol. 36 no.8:917-920 Ag '65.

1. Z II Kliniki Chorob Wewnętrznych Akademii Medycznej we Wrocławiu (Kierownik: prof. dr. med. A. Falkiewicz).

VORONEZHSKIY, V.I.; KOBERNICHENKO, I.A.; CHURBANOVA, I.S., red.;  
SHCHEGLOVA, I.B., red.

[Mechanisation of sugar beet growing and harvesting; a  
survey] Mekhanizatsiya vozdel'vaniya i uborki sakharnoi  
svекly; obsor. Moskva, 1962. 132 p. (Seriya XI: Traktor-  
noe i sel'skokhoziaistvennoe mashinostroenie)

(MIRA 17:4)

1. Moscow. Tsentral'nyy institut nauchno-tekhnicheskoy in-  
formatsii po avtomatizatsii i mashinostroyeniyu.

JOBERNICHENKO, I.A., insh.

Moistening plowshares during plowing. Mekh. sil'. hosp. 9  
no.10:32-3 of cover 0 '58. (MIRA 11:10)  
(Plows)

~~KORNNICHENKO, Ivan, IMH.~~

T-44 tractor. Mekh. sil'. hosp. 10 no.3:32 Mr '59.

(MIRA 12:6)

(Tractors)

KOBERNICHENKO, I.A., 1ash.

Pistonless engine pump. Mekh. sil'. hosp. 11 no.11:28-30 N '60.

(MIRA 13:11)

(Pumping machinery)

KOBERNICHENKO, I.A., inst.

Machinery and equipment for the care of orchards. Meth. sil'.  
hosp. 11 no.6:23-24 Je '60. (MIRA 13:11)

(Agricultural machinery)  
(Fruit culture)

KOBERNICHENKO, I.A., inzh.

Possibilities for mechanizing operations in viticulture. Mekh.  
sil'. hosp. 12 no. 4:14-16 Ap '61. (MIRA 14:4)  
(Viticulture) (Agricultural machinery)

KOERNIK, A.P.

Variation of the methodology of inserting electrodes in acute and chronic experiments. Fisiol. zhur. [Ukr.] 10 no.3:410-411 My-Je '64. (MIRA 18:9)

1. Kafedra normal'noy fiziologii Vinnitskogo meditsinskogo instituta im. Pirogova.



KOBERNIK, I. N.

USSR/Medicine - Veterinary

FD-1271

Card 1/1 : Pub. 137-8/17

Author : Kobernik, I. N., Veterinary Physician

Title : Necrobacillosis in horses

Periodical : Veterinariya <sup>3/10</sup>, 44-48, Oct 1954

Abstract : Experimental data and results of observations of incidence of necrobacillosis in horses show that the causative organism, *B. necrophorum*, possesses great virulence. *B. necrophorum* is found usually in surroundings rich in decomposed animal protein. Favorable conditions for the development of *B. necrophorum* exist in stockyards where puddles of shallow, stagnant water, polluted with excrement of horses, are found. Removal of manure and drainage of pools of stagnant water usually results in complete eradication of the disease from the area. Endemic occurrence of necrobacillosis has never been registered in horses housed in stables. A table.

Institution : Kayskaya Rayon Veterinary Bacteriological Laboratory, Kirovskaya Oblast.

Submitted :

*Index 5.6*  
DILKOVSKIY, M.M., kand. tekhn. nauk; KOBURNIK, S.O., mladshiy nauchnyy  
soтрудnik.

Investigating marginal pressure of current in water discharge  
installations. Inv. Inst. gidrol. i gidr. AN URSS 8:116-128 '51.  
(Hydraulics) (Spillways) (MIRA 11:4)

КОБЕРНИК, С.

Earthwork

Utilization of a bulldozer in building the abutment of an earth dam. MTS, 12, no. 1, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May <sup>2</sup> 1953, Uncl.

KOBERNIK, S., Eng.

**Earthwork**

Using a scraper in building the cut-off wall of an earth dam. MTS 12 no. 8, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

ROSENBERG, S. G., Eng.

Spillways

Discharge coefficient of an ideal spillway with a broad crest. Gidr. stroi. 22, No. 1, '53.

Monthly List of Russian Accessions, Library of Congress  
June 1953. UNCL.

KOBERNIK, S.G., inzhener.

On the magnitude of local losses when flow in open streams is obstructed by abutments. Izv. Inst. gidrol. i gidr. AN URSS 11:40-46  
'54. (MIRA 8:4)

(Hydraulics)

USSR.

1401. *Reber, B. G.* Discharge coefficient for a low trapezoidal overflow weir (in Russian). *Gidrotekhn. Stroi* 13, 8, 26-34, 1964.

Discharge coefficients for low overflow weirs (with their height 0.8 to 2 times water head) depend on the slope of their face and on the ratio of head to the top width. Experiments showed that these coefficients are up to 13% lower than usually recommended for an inclined upstream face; congruence is better when upstream face is vertical and downstream face is inclined.

8 Kotapala, USA

SILIN, N.A.; KOBERNIK, S.G.; ASAULENKO, I.A.

Investigation of the operation of the 1000-80 hydraulic pipe-line  
dredge and the 900 millimeter diameter spoil pipe. Inv. Inst.  
gidrol. i gidr. AN URSS no.14:54-65 '56. (MLRA 9:12)

(Dredging machinery)



KOBERNIK, S.G.

SILIN, M.O.; KOBERNIK, S.G.

Determination of the motion parameters of a water-earth  
mixture in pressure pipes. Dop. AN URSS no.2:141-144  
'57.

(MLRA 10:5)

1. Institut gidrologii ta gidrotekhniki AN URSS. Predstaviv  
akademik AN URSS O.I. Sukhomel.  
(Hydrodynamics)

80V/21-58-2-14/28

**AUTHORS:** Silin, N.A., Kobernik, S.O. and Asaulenko, I.A.

**TITLE:** Head Losses During the Motion of Water and Water-Solid Mixture in Large Diameter Conduits (Poteri napora pri dvizhenii vody i vodogruntovoy smesi v truboprovodakh bol'shikh diametrov)

**PERIODICAL:** Dopovidi Akademii nauk Ukraini'koi RSR, 1958, Nr 2, pp 175-177 (USSR)

**ABSTRACT:** The authors present the results of investigations conducted from 1954 to 1956 to determine head losses in large-diameter conduits. The investigations were carried out on pressure conduits of the earth suction dredges, which delivered water-solid mixture into the earth dams of the Kakhovka and Kremenchug Hydroelectric Power Plants. The pipes were of the following diameters: 900, 800 and 614 mm. The authors present numerical data in tabulated form and in graphical form as curves expressing the values of head losses plotted versus the velocity, the diameters of the conduits and the specific weight of the water-solid mixture. There are 4

Card 1/2

SHVETS, O.I. [Shvets', H.I.]; ZIL'BAN, M.S.; KOBERNIK, S.O. [Kobernyk, S.H.];  
OLINIK, A.Ya. [Olinyk, O.Ia.]; PIVOVAR, N.O. [Pyvovar, M.H.];  
ROZOVSKIY, I.L. [Rozovs'kiy, I.L.]; SLOBODYAN, R.T.; DIDKOVSKIY,  
M.M. [Didkovs'kiy, M.M.], kand.tekhn.nauk, otv.red.; KRENTSEL', Sh.O.  
[Krentsel', Sh.H.], red.-leksikograf; SHIKAN, V.L., red.isd-va;  
BUNII, R.O., tekhn.red.

[Russian-Ukrainian hydraulic-engineering dictionary; 13000 terms]  
Rusko-ukrainskii gidrotekhnicheskii slovar'. 13000 terminov. Kiev,  
Isd-vo Akad.nauk USSR, 1960. XIV, 192 p. (MIRA 13:7)

(Hydraulic engineering--Dictionaries)  
(Russian language--Dictionaries--Ukrainian)

KOBERNIK, S.G. [Kobernyk, S.H.]

Characteristics of large dredges working with water and a water-soil mixture. Dop.AN USSR no.8:1045-1049 '60. (MIRA 13:9)

1. Institut gidrologii i gidrotekhniki AN USSR. Predstavleno akademikom AN USSR G.I. Sukhomelov.  
(Dredging machinery)

KOBERNIK, S.O. [Kobernyk, S.H.]

Determining the work regime of large excavating pumps. Visti.  
Inst. gidrol. i gidr. AN URSS 17:85-111 '60. (MIRA 14:8)  
(Earthmoving machinery)

SILIN, M.A. [Silin, M.O.], kand.tekhn.nauk; KOBERNIK, S.G., [Kobernik, S.H.],  
inzh.

Measuring the discharge of a water-soil mixture with Venturi tubes.  
Visti Inst.gidrol.i gidr.AN USSR 18:68-75 '61. (MIRA 15:3)  
(Venture tubes) (Hydraulic conveying)

SILIN, Nikolay Aleksandrovich; KOBERNIK, Semen Grigor'yevich. Prinimal  
uchastiye KARASIK, V.M.; PISHCHENKO, I.A., kand. tekhn. nauk,  
otv. red.; LABINOVA, N.M., red.; DAKHO, Ya.B., tekhn. red.

[Operating conditions of large dredgers and pipelines] Reshiny  
raboty krupnykh samlenosnykh snariadov i truboprovodov. Kiev,  
Izd-vo AN USSR, 1962. 214 p. (MIRA 16:3)

(Hydraulic conveying) (Dredging machinery)

VEREMEYEVA, A.A., inzh.; DUL'ZON, N.A., inzh.; KOBERNIK, Ye.D., inzh.;  
PANASYUK, N.G., inzh.; SAVOST'YANOV, Yu.Ye., inzh.

Protection of generators from various stator windings damages by  
means of differential current transformers. Elek. sta. 36 no.2:  
40-45 F '65. (MIRA 18:4)



CHWALIBOGOWSKI, Artur; MALECKA, Bożena; KOBERSKA, Alicja; SZCZEPANSKI, Zbigniew

Studies on dynamic criteria of pathological processes in tuberculous cerebrospinal meningitis. *Cruslica* 29 no.2:145-152 F '61.

1. Z Kliniki Chorob Dzieci Śląskiej AM w Zabrze Kierownik: prof. dr med. A. Chwalibogowski.

(TUBERCULOSIS MENINGEAL blood)  
(BLOOD PROTEINS)

KOBESA, N. N. and DOBKOTOV, N. N.

"The Problems of Designing Open Hearth Furnaces", p. 15, and "Investigation of the Heated Parts of Open Hearth Furnaces for the Purpose of Increasing Their Durability", p. 24, Trudy Instituta Chernoy Metallurgii, Vol. 9, 1955.

STERESCU, N.; KOBLESHIANU, S.; STANCU, A.

Features of thyroid gland inhibition during physical stress;  
studies on rats and guinea pigs with the aid of radioactive  
iodine ( $I^{131}$ ) and radiophosphorus ( $P^{32}$ ). Rev. sci. med. 5  
no.3/4:25-239 '60.

(THYROID GLAND physiol.) (STRESS physiol.)  
(IODINE radioactive) (PHOSPHORUS radioactive)

KOPETS, A. V.

KOPETS, A. V. -- "The Effect of Barbardil as an Exogenic Factor on the Clinical Picture of Schizophrenia in Hibernation Therapy." Khar'kov Medical Inst. Khar'kov, 1955. (Dissertation for the Degree of Candidate in Medical Sciences)

SO: Knizhnaya Letopis', No 1, 1956

**KORBITZ, A.V.**

Effect of amytal intoxication on clinical picture of schizophrenia during sleep therapy. Zh. nevropat. psikhiat., Moskva 53 no.3:214-218 Mar 1953.  
(OLML 25:1)

1. Department of Psychiatry of Khar'kov Medical Institute and Ukrainian Psychoneurological Institute.

Kobets, A. V.

COUNTRY : USSR  
 CATEGORY : Pharmacology and Toxicology. Narcotics and Hypnotics  
 ABS. JOUR. : RZhBiol., No. 1 1959, No. 4402  
 AUTHOR : Kobets, A. V.  
 INST. :  
 TITLE : Effect of Barbamyl upon Higher Nervous Activity in Dogs  
 ORIG. PUB. : Fiziol. zh., 1958, 4, No 2, 149-155  
 ABSTRACT : Barbamyl (B; 0.025, 0.1, 0.2, 0.3 and 0.5 g) was introduced internally into two dogs with a strong and a weak type of nervous system. B caused disinhibition of differentiation and phasic states already after 15 minutes. It is noted that B has the ability to paralyze both the inhibiting and stimulating processes. The protective inhibition which develops at the same time is usually in-

CARD: 1/2 *Kharkov Medical Inst.,  
 Chair of Psychiatry i Ukr.  
 Psychoneurological Inst.*

KOBETS, B.

More attention to the education of youth. Radio no.11:6-7 N '63.  
(MIRA 16:12)

1. Nachal'nik Riazhskogo radiokluba Dobrovol'nogo obshchestva  
sodeystviya armii, aviatsii i flotu.

ZYABKO, L.P.; KOBEYS, B.M.

Solanine content of eggplants in the dynamics of their growth and development. *Izv.vys.ucheb.sav.; pishch.tekh.* no.1:26-28 '64. (MIRA 17:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut konservnoy promyshlennosti.



KOBETS

[B.V.]

"Foot-and-Mouth Disease in the Camel". Konevodstvo, 1936, No 10. (Bibliography from article Foot and Mouth Disease by A. L. Skomorokhov, State Publishing House for Agricultural Literature, Moscow/Leningrad 1947.)

SO:

U-1625, 11 January 1952,

~~CONFIDENTIAL~~  
KOBETS, B.V.

Epidemiological effectiveness of revaccination with living dried  
brucellosis vaccine for cutaneous administration developed by the  
Gamsaleia Institute of Epidemiology and Microbiology of the Academy  
of Medicine of the U.S.S.R. Tes. i dokl.konf. Irk.gos.nauch.-issl.  
protivochum.inst. no.2:25-26 '57. (MIRA 11:3)  
(VACCINE) (BRUCELLOSIS)

*KOBETS, B. V.*  
PINIGIN, A.F.; VYBOROV, O.P.; PETUKHOVA, O.S.; ISTOMINA, T.I.; YUZHKOVA, E.N.;  
KOBETS, B.V.; SVACHNIKOVA, L.D.; ZELIKMAN, Yu.Ya.; PADAIKO, Z.F.;  
MIKHAILOVSKAYA, Ye.M.; KALMYKOVA, A.D.; KOSTERIN, V.V.; BELKO, V.I.;  
KOSTENKO; MUSIKHINA

Distribution of brucellosis in Eastern Siberia and the Far East.  
Tes. i dokl.konf.lrk.gos.nauch.-issl.protivochum. inst.no.2:55-56  
'57. (MIRA 11:3)

(SIBERIA, EASTERN--BRUCELLOSIS)  
(SOVIET FAR EAST--BRUCELLOSIS)

KOBETS, Grigoriy [Kobets, Ryhor]

A mother's heart. Rab. 1 sial. 38 no.10:16-17 0 '62.  
(MIRA 15:10)

1. Bumashnaya fabrika "Spartak", Shklov.

(Mothers)

KHOMENKO, P.; KOBETS, I. [Kobets', I.]

Finish with the mismanagement of collective farm machinery.  
Mekh. sil', hosp. 12 no.12:22-23 D '61. (MIRA 17:1)

1. Nachal'nik inspektii po tekhnicheskomu nadzoru Zhito-  
mirskogo oblastnogo ob'yedineniya "Sil'gosptekhnika" (for  
Khomenko). 2. Spetsial'nyy korrespondent zhurnala "Mekhani-  
satsiya sil's'kogo gospodarstva" (for Kobets).

PETRENKO, M.; KOBETS', I.

How compulsory education is organized in Yagotin. Mekh. sil'.  
hosp. 14 no.6:29-30 Ja '63. (MIRA 17:3)

1. Korrespondent "Kiivs'koi pravdi" (for Petrenko). 2. Spetsial'nyy  
korrespondent "Mekhanizatsii sil's'kogo gospodarstva" (for Kobets').

KORNTS', I.D.

Melitopol' contracts. Mekh.sil'. hosp. 9 no.3:20 Mr '53.  
(MIRA 11:4)  
(Melitopol' District--Machine-tractor stations)

KOBETS, L. G.

Kobets, L. G.

"The Non-Linear Theory of Elastic Open Thin-Walled Rods." Min Higher Education USSR.  
Khar'kov Construction Engineering Inst. Chair of Structural Mechanics. Khar'kov, 1955.  
(Dissertation for the Degree of Candidate in Technical Sciences.)

SO: Krishnaya Letopis', No. 27, 2 July 1955



124-58-9-10478

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 9, p 150 (USSR)

AUTHOR: Kobets, L. G.

TITLE: Fundamental Equations of the State of Stress and Strain in Open Thin-walled Elastic Beams at Large Angles of Torsion (Osnovnyye uravneniya napryazhenno-deformirovannogo sostoyaniya uprugikh nezamknutyykh tonkostennykh stержney pri bol'shikh uglakh zakruchivaniya)

PERIODICAL: Tr. Kar'kovsk. inzh. -stroit. in-ta, 1957, Nr 5, pp 99-110

ABSTRACT: An examination of the problem of the flexural torsion of straight thin-walled elastic beams having open profiles with an invariable contour at large angular displacement relative to the longitudinal axis. The angular displacements relative to axes lying within the plane of the transverse section, as well as the elongations and shear deformations are assumed to be small. Use is made of the equations of the nonlinear theory of the deformations of thin shells. The equations of equilibrium and the natural boundary conditions are introduced therein by means of the variational method. Formulas are given for the generalized forces that correspond to the generalized cross-sectional displacements of a thin-walled beam.

Card 1/1

K. F. Kovalov

1. Beams--Torsion 2. Beams--Stresses 3. Mathematics--Applications

*Kobets, L.J.*

BYCHKOV, D.V., doktor tekhn.nauk, prof.; MIROV, M.O.; LUNEV, Vasilii Ivanovich, kand.tekhn.nauk, dots.; IVANOV, Grigoriy Mikhaylovich, kand.tekhn.nauk.; PAVLOV, B.P., prof., doktor tekhn.nauk, retsentsent; ~~KORNEI~~ I.A., kand.tekhn.nauk, retsentsent; UDOVNIKOV, S.A., inzh., retsentsent; BOGOMOLOV, G.I., inzh., retsentsent; BORODINA, I.S., red. isd-va; KAPLAN, M.Ya., red.isd-va; PERSON, M.N., tekhn. red.; UL'KINA, Ye.A., tekhn.red.

[Engineering mechanics] Tekhnicheskaya mekhanika. Pod obshchey red. D.V.Bychkova. Moskva, Gos.isd-vo lit-ry po stroit. i arkhitekt. Pt.1. Bychkov, D.V., and M.O.Mirov [Theoretical mechanics] Teoreticheskaya mekhanika. Isd. 2-oe. 1957. 282 p. Pt.2. Lunev, V.I. [Resistance of materials] Soprotivleniye materialov. Isd. 2-oe, perer. 1957. 255 p. Pt.3. Ivanov, G.M. [Statics of structures] Statika sooruzhenii. 1957. 226 p. (MIRA 11:2)  
(Mechanics, Applied) (Strength of materials)

ACC NR: AP6011478

SOURCE CODE: UR/0070/66/011/002/0332/0334

AUTHOR: Bokiy, G. B.; Kobata, L. I.

ORG: Institute of Inorganic Chemistry, Siberian Department, AN SSSR, (Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR)

TITLE: Effect of temperature gradient on the real structure of fluorite crystals

SOURCE: Kristallografiya, v. 11, no. 2, 1966, 332-334

TOPIC TAGS: single crystal growth, single crystal growing

## ABSTRACT:

Two Soviet scientists from the Institute of Inorganic Chemistry, Siberian Department, AS USSR briefly discuss their experimental data on the growth of fluorite single crystals activated with rare earth elements. Their interest in the  $\text{CaF}_2$  crystals was prompted by the possibility of laser application of these crystals.

The importance of thermal factors in growing high-quality crystals had been recognized earlier by many Soviet and Western scientists. In view of this, the authors of this article studied the effects of radial thermal gradient and symmetry of the thermal field during crystallization on the

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ACC NR: AP6011478

real structure of fluorite crystals with admixtures of rare earth elements. They applied either vertical zone melting with seeding or the Stockbarger growth technique combined with vertical zone melting. Both techniques are modifications of the Stockbarger and horizontal zone melting techniques previously used to grow  $\text{CaF}_2$  crystals. Growing of the crystals by both techniques was conducted in a universal apparatus which was conceived and described previously\* and in an inert gas atmosphere. The furnace was heated by an induction coil. Variations in radial thermal field were achieved by using single graphite crucibles with a wall thickness varying in the 1-5 mm range and multi-section (3-4) crucibles. Other operating conditions were held constant.

The crucibles used for crystal growth in the modified Stockbarger technique had a conic bottom with a 0.8 mm orifice at the vertex of the cone, which was designed to increase the yield of the single crystals. This technique, however, proved to be unsuccessful with respect to the yield. In contrast, the introduction of a chemically cleaned single crystal seed in the crucible, below the charge, contributed to an increase in yield. The charge was made of natural fluorite with additions of 0.2%  $\text{PbF}_2$  as an antihydrolytic agent and 0.01 to 5 mol% rare earth activator (as the oxide, fluoride, or oxyfluoride). Crystal growing began immediately after fusion of the seed and was pursued at a rate of 15-20 mm/hr under strict tempera-

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ture control. The magnitude of the radial thermal gradient and the symmetry of the thermal field were evaluated from the shape of the solid-liquid interface by a technique used previously \*\* The fluorite crystals grown were selectively etched and the density of dislocations in the etched crystals, as a measure of structural perfection, was determined microscopically.

The arithmetical means  $\sigma^*$  of the density of dislocations for 10-15 crystals grown in different crucibles are given in Table 1.

Table 1. Density of dislocations of fluorite crystals

$\sigma^*$ of crystals grown in single crucibles with wall thickness		$\sigma^*$ of crystals grown in multi-section crucibles		
1.5 mm	5 mm	For a crystal as a whole	For the region with curved interface	For the region with plane interface
$1.8 \cdot 10^5$	$7.5 \cdot 10^4$	$4.5 \cdot 10^5$	$10^6$	$6 \cdot 10^4$

The crystal-melt interface was convex, nearly spherical, in single crucibles with 1-1.5 mm wall thickness and was much flatter in crucibles with up to 5 mm wall thickness. The shape of the interface indicated a large radial thermal gradient in the case of the thin wall and a significantly decreased gradient in the case of the thick wall single crucibles. The

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